

Cont'd
C2
4. (Three Times Amended) The grating optical sensor as claimed in claim 1, wherein a spectral transmission of the lens, the diffusion plate, and the modulator is limited to the visible region of electromagnetic radiation.

15. (Twice Amended) A method for generating a white standard signal, comprising:

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providing a grating optical sensor, the sensor comprising: a lens imaging an object space; a diffractive hexagonal 3D grating optical modulator in the image plane of the lens to form at least one trichromatic RGB diffraction pattern; a photoelectric receiver arrangement arranged in the near field downstream of the modulator, having individual receivers configured to generate electric signals in accordance with centrosymmetrically trichromatic RGB diffraction orders of the diffraction pattern; and an evaluation device for the electric signals generated by the individual receivers;

superimposing into the image plane an incoherent background radiation assigned to the object space by diffuse scattering in either a pupil of the imaging lens or a plane conjugate to the lens or both; and

forming a white standard signal from the diffraction pattern, assigned to a colorless part of the object space, with identical chromatically additive brightness values and a maximum trichromatically additive brightness value.

In the Abstract:

Please amend the abstract by replacing it with the following clean version. The changes are shown explicitly in Appendix C.

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A grating optical sensor includes: a lens imaging an object space; a diffractive hexagonal 3D grating optical modulator in the image plane of the lens to form at least one trichromatic RGB diffraction pattern; a photoelectric receiver arrangement arranged in the near field downstream of the modulator, having individual receivers configured to generate electric signals in accordance with centrosymmetrically trichromatic RGB diffraction orders of the diffraction pattern; an evaluation device for the electric signals generated by the